

# MODULAR WALL PANEL CONSTRUCTION

## BACKGROUND OF THE INVENTION

### 1. Field of the Invention

The present invention relates generally to a method and apparatus for installing modular wall panels of the type used in office environments and, more particularly, to a method and apparatus for quickly and conveniently leveling modular wall panels during installation.

### 2. Description of the Related Art

Modular wall panel systems have become increasingly popular as a means for dividing space in modern offices. Such systems offer the advantage that space can be conveniently reconfigured as the needs of the office environment change. They can be added to, changed in space dimensions and moved with relatively little manual labor and office disruption as compared to permanent partition construction. An example of a modular wall panel system is disclosed in U.S. Patent No. 4,685,255 issued to Kelley. A typical modular wall panel comprises a metal frame to which one or more decorative panels are attached. The decorative panels are often fabric covered to lend a pleasing aesthetic appearance to the system. The panels may also be provided with internal cable routing means for convenient connection of telecommunications and/or electrically operated equipment. Also typical of the panels is that the frames are provided with means for supporting shelving, cabinets and work surfaces or the like.

In the installation of a modular wall panel system, care must be taken to level the individual panels on the supporting floor surface in order to properly align the vertical edges of the panels so they can be connected together as a unit. To this end, most modular wall panels are equipped with vertically adjustable floor glides, usually one each on opposite sides of the panels along the bottom of the panel. However, a problem encountered with known floor glides as used on modular wall panels is that they are difficult to access for adjustability. Typically, the usual floor glide has a threaded stem which is adjustable using a wrench from beneath the panel and is slow to adjust because the wrench can be moved only through a small range of stem rotation at a time. Often the stem is obscured from view and the installer must rotate the stem by manual feel alone. Modular wall panel systems exist in which the panels are leveled while the leveling means is easily accessible such as from top access. An example of such a system is disclosed in U.S. Patent No. 4,120,124 issued to Temple et al. and assigned to the assignee herein. However, in such a system the framework of the panel must essentially be assembled in individual pieces making the panel system time consuming to construct on site.

It is therefore desirable to provide a modular panel system that requires only minimal assembly at the site thus reducing labor necessary for installation. It is further desirable to provide such a panel system which is constructed with floor glides that are easily adjusted such that an assembly of panels can be readily leveled on a supporting floor surface to evenly distribute the load across the individual panels. Still further it is desirable to provide such a panel system that is manufacturable by conventional techniques, is aesthetical pleasing in appearance and is cost-effective to produce.

## **SUMMARY OF THE INVENTION**

The present invention improves over the prior art by providing a modular wall panel assembly including a generally rectangular preassembled frame having a generally horizontal lower channel member and a base rail secured to the lower channel member in parallel spaced relation thereto. Two opposed floor glide assemblies are secured to the base rail and each includes an upwardly directed threaded stem configured at their upper ends to be rotated by a suitable rotary tool. An aperture is provided in the lower channel member in registry with each stem. The frame can thus be leveled on a floor by inserting a rotary tool vertically through the apertures and rotating the threaded stems as desired. Thereafter, decorative or other panels may be conveniently installed on the frame to substantially conceal the floor glides.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

The foregoing and other novel features and advantages of the invention will be better understood upon a reading of the following detailed description taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a front perspective view of an assembled modular wall panel constructed in accordance with the principles of the invention;

FIG. 2 is a front perspective view of the wall panel assembly illustrated in FIG. 1 shown with its decorative panels or tiles removed; and

FIG. 3 is an enlarged fractional perspective view of the bottom right corner of the panel assembly illustrated in FIG. 2.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawing, and initially to FIG. 1, a modular wall panel assembly is designated generally by the reference numeral 10 and includes as its principal components a generally rectangular preassembled frame 12, which will more readily be seen in detail in FIG. 2, to which an upper decorative panel 14 has been detachably secured. In a manner well-known in the art the panel 14 may be fabric covered with any desirable material for sound deadening and aesthetic appearance. The modular panel 10 is constructed as to be readily connected along side rails 16 to other similar panels to create a system of space dividing partitions suitable for an office environment. Along the bottom of the panel 10 a kick plate 18 may be detachably secured to the frame 12. A pair of floor glides 20 project downwardly from the panel 10 beneath the kick plate 18 as will be described in detail hereinafter.

Turning now to FIG. 2, the panel 10 is illustrated with the decorative panel 14 and kick plate 18 removed showing in detail the construction of the frame 12. The side rails 16 are connected to an upper channel member 22 and a lower channel member 24 as by welding, for example. An intermediate channel member 26 may be provided for strength and also to support various electrical or telecommunications devices internal to the panel 10. The assembly 10 also includes a base rail 30.

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a17* Referring to FIG. 3, the bottom right corner of the assembly 10 shown in FIG. 2 is illustrated in enlarged perspective. In this view, which is a mirror image of the opposite left-hand corner, the base rail 30 can be seen to be connected by a generally L-shaped glide tower 32 to the lower channel member 24. The glide tower 32 has an internally threaded portion 34 which threadedly receives a stem 36 of a floor glide 20. The bottom end of each floor glide 20 is

provided with a foot pad 38. Upper ends 40 of the stems 36 are configured in the illustrated embodiment with a hex head. Alternatively, the upper ends 40 of the stems 36 may be provided with screw driver slots or Torx recesses. An aperture 42 is formed in the lower channel member 24 in registry with each upper end 40 of the stems 36.

Installation of a modular panel system utilizing the panels of the present invention can now be appreciated to be a convenient and labor saving process over installation of prior art systems. The panel assemblies illustrated in FIG. 2 can be preassembled as modular units at a factory for example and conveniently shipped to the installation site. The assemblies may be placed upright on a floor at their approximate intended location. An installer may then level the assemblies such as by placing a carpenter's level on the lower channel member 24 and adjusting the height of the floor glides 20 using a ratchet wrench or cordless drill having a bit inserted vertically through the apertures 42 of the channel member 24. Once the assemblies are leveled the decorative panels 14 and kick plate 18 may be installed. For this purpose the frame 12 may preferably be provided with spaced apertures 44 which receive snap-fit fasteners suitably attached to the backs of the panels 14 and kick plates 18. Thus, the panel system using the present panels 10 is convenient and quick to install.

While the present invention has been described in connection with a preferred embodiment thereof, it will be apparent to those skilled in the art that many changes and modifications may be made without departing from the true spirit and scope of the present invention. Accordingly, it is intended by the appended claims to cover all such changes and modifications as come within the spirit and scope of the invention.